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DIGITAL TRANSFORMATION AND SERVICE QUALITY AS DRIVERS OF CUSTOMER LOYALTY: THE MEDIATING ROLE OF CUSTOMER SATISFACTION IN INDONESIAN SMEs

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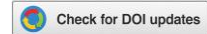
ABSTRACT

Purpose-This article develops an integrative framework explaining how digital transformation and service quality generate customer loyalty in Indonesian small and medium-sized enterprises (SMEs), with customer satisfaction as the central mediating mechanism. **Design/methodology/approach-**An integrative literature review synthesizes established and recent research on digital transformation, dynamic capabilities, service quality, expectation-confirmation, satisfaction, and loyalty. The synthesis follows problem formulation, purposive database-oriented searching, conceptual coding, comparison of mechanisms, and theory integration. **Findings-**Digital transformation is unlikely to create loyalty merely through technology acquisition. Its customer value depends on whether SMEs convert digital resources into reliable, responsive, secure, accessible, and personalized service encounters. The framework proposes that digital transformation improves loyalty directly by increasing convenience and relational continuity, and indirectly by strengthening service quality and satisfaction. Service quality also predicts loyalty directly and through satisfaction. The joint configuration of digital capability and human service consistency is therefore more consequential than digitization intensity alone. **Originality/value-**The article connects firm-level digital capability with customer-level evaluations in an SME-specific model and clarifies satisfaction as the mechanism that converts operational improvements into durable relational outcomes. It also identifies resource constraints, digital trust, channel integration, and customer heterogeneity as boundary conditions. The framework provides testable propositions and a staged implementation agenda for Indonesian SMEs.

Keywords: customer loyalty; customer satisfaction; digital transformation; Indonesian SMEs; service quality

1. INTRODUCTION

Digital transformation has shifted from an optional modernization project to a strategic requirement for small and medium-sized enterprises (SMEs). Digital payments, social commerce, cloud-based customer records, marketplace platforms, data analytics, and automated communication enable smaller firms to reach customers beyond their physical location and coordinate service with fewer resources. In Indonesia, this change is particularly visible in the diffusion of QR-based payments: Bank Indonesia reported that, by the first semester of 2025, QRIS had reached 39.3 million merchants and 93.16% of them were micro, small, and medium enterprises. Yet widespread access to a digital tool does not mean that enterprises have transformed their processes, employee routines, value propositions, or customer relationships. The OECD (2024) notes that Indonesian businesses still make comparatively limited use of digital tools despite strong mobile penetration and a vibrant



platform economy. This difference between digital access and organizational transformation creates an important quality-management problem.

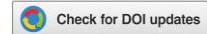
For SMEs, the strategic promise of digital transformation is often framed in terms of sales growth, efficiency, visibility, and market access. These outcomes matter, but they do not explain whether customers remain with a firm after the novelty or convenience of a digital channel disappears. Loyalty is a relational outcome reflected in repeat patronage, resistance to competing offers, positive word of mouth, and willingness to continue the relationship. It is especially valuable to SMEs because limited marketing budgets make customer replacement costly and because reputation circulates rapidly within local and digital communities. Technology can support loyalty by making transactions easier and interactions more continuous. It can also weaken loyalty when interfaces fail, responses become impersonal, customer data appear unsafe, or digital promises are not fulfilled by the physical operation.

Service quality supplies the missing operational link. Classic service-quality research treats quality as a customer's judgment of service excellence, commonly expressed through reliability, responsiveness, assurance, empathy, and tangible or interface cues (Parasuraman et al., 1988). In digitally mediated settings, customers also evaluate availability, usability, privacy, fulfilment, recovery, and the consistency of information across channels (Parasuraman et al., 2005; Zeithaml et al., 2002). These evaluations are not secondary to digital transformation; they reveal whether transformation has produced customer value. A sophisticated payment system does not compensate for inaccurate orders, delayed delivery, unclear complaint handling, or inconsistent information. Conversely, even a modest digital portfolio can strengthen customer relationships when it makes a dependable service easier to access.

Customer satisfaction is positioned in this article as the key translation mechanism. Satisfaction is a post-consumption evaluation formed when experienced performance is compared with expectations and accumulated across encounters (Oliver, 1980, 1999). Digital capability and service quality influence the cues that customers observe; satisfaction integrates those cues into an overall judgment; loyalty reflects the subsequent relational response. This sequence is consistent with expectation-confirmation reasoning and with the stimulus–organism–response logic in which organizational and service stimuli shape an internal evaluation that produces approach or avoidance behavior. It also explains why firms may report high digital adoption without equivalent loyalty: technology may change the stimulus but fail to improve the customer's evaluative state.

Existing research remains fragmented in three ways. First, digital-transformation scholarship predominantly examines organizational antecedents, business-model change, innovation, or firm performance, while customer-level relational outcomes receive less integrated treatment (Cioppi et al., 2023; Vial, 2019; Verhoef et al., 2021). Second, service-quality and loyalty studies often begin at the encounter level and do not explain the organizational capabilities that enable consistent quality across physical and digital touchpoints. Third, evidence developed in large firms or purely online services may not transfer directly to Indonesian SMEs, which often combine owner-centered decisions, informal routines, resource scarcity, marketplace dependence, and close interpersonal relationships. The SME context therefore requires a multilevel explanation connecting digital resources, operating capabilities, customer experience, satisfaction, and loyalty.

This article addresses the question: How do digital transformation and service quality jointly drive customer loyalty in Indonesian SMEs, and through what mediating role does customer satisfaction operate? It makes three contributions. First, it reframes digital transformation as a



capability-building process whose customer outcome depends on service execution. Second, it integrates dynamic-capability, service-quality, and expectation-confirmation perspectives into a capability–experience–relationship chain. Third, it specifies direct, indirect, and sequential propositions together with boundary conditions relevant to Indonesian SMEs. The remainder of the article develops the theoretical foundations, explains the integrative review method, presents the framework and propositions, discusses implications, and outlines a testable research agenda.

2. LITERATURE REVIEW AND THEORETICAL DEVELOPMENT

2.1. *Digital transformation as an SME capability*

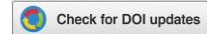
Digital transformation is more than converting analogue information into digital form or adding isolated technologies. It is an organizational change process in which digital technologies alter value creation, structures, processes, and relationships (Vial, 2019; Verhoef et al., 2021). This distinction separates digitization, digitalization, and transformation. Digitization converts information; digitalization uses digital tools to improve a task; transformation reconfigures how the enterprise senses customer needs, coordinates resources, and delivers value. For SMEs, the distinction is crucial because a social-media account, marketplace listing, or QR payment may indicate adoption without demonstrating strategic integration.

Dynamic-capability theory helps explain how transformation produces heterogeneous outcomes. Firms require the capacity to sense changes, seize opportunities, and reconfigure resources (Teece, 2007). Applied to SMEs, sensing includes reading digital reviews, transaction patterns, and customer inquiries; seizing includes selecting appropriate platforms and redesigning offers; reconfiguring includes aligning employee roles, inventory, fulfilment, customer data, and service-recovery routines. Digital resources become valuable when embedded in these capabilities. Because SMEs have fewer managerial layers, they may change quickly, but dependence on the owner, limited skills, financial constraints, and weak data governance can prevent routinization (Eller et al., 2020; OECD, 2021).

A customer-facing digital transformation can create four immediate benefits. Accessibility reduces time and location barriers. Information transparency improves product comparison and expectation formation. Process integration reduces errors and waiting time. Relational continuity enables follow-up, personalization, and complaint tracking. Recent work on SME customer-service digitalization similarly identifies multiple organizational and operational drivers rather than a single technology solution (Costa et al., 2024). Each benefit can increase convenience and perceived value, but each has a corresponding risk: exclusion of less digitally confident customers, information overload, system failure, intrusive personalization, or privacy concerns. Accordingly, transformation should be assessed by realized customer outcomes rather than the number of technologies installed.

2.2. *Service quality across physical and digital touchpoints*

Service quality is a global judgment about the superiority of service delivery. SERVQUAL established reliability, responsiveness, assurance, empathy, and tangibles as influential dimensions (Parasuraman et al., 1988), while subsequent research adapted the logic to electronic services. E-S-QUAL emphasizes efficiency, system availability, fulfilment, and privacy, with recovery quality becoming salient after failure (Parasuraman et al., 2005). For an omnichannel SME, these perspectives should not be treated as separate worlds. Customers judge the complete journey: the accuracy of a marketplace description, the speed of a messaging response, payment security, employee courtesy, product conformity, delivery punctuality, and fairness of problem resolution.



Reliability remains foundational because digital promises make performance more observable. Responsiveness expands from face-to-face speed to response time across messaging, social media, and marketplaces. Assurance now includes employee competence as well as perceived data and payment security. Empathy requires maintaining human understanding even when communication is templated or automated. Tangibles include the physical environment, packaging, interface clarity, and visual credibility. Fulfilment and recovery connect the digital front end to operational execution. Thus, digital transformation can increase the importance of quality management: more channels create more opportunities for inconsistency unless information and responsibility are coordinated.

Service quality can drive loyalty directly because consistently superior encounters reduce perceived risk and strengthen trust. It can also operate indirectly through satisfaction. The direct path is plausible when customers infer stable organizational competence from repeated reliable performance. The mediated path is plausible when quality shapes an evaluative response that subsequently guides intentions and behavior. Caruana (2002) found satisfaction to be an important mediator between service quality and loyalty, and broad service research likewise associates quality improvements with favorable behavioral intentions (Zeithaml et al., 1996).

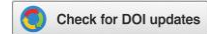
2.3. Customer satisfaction and customer loyalty

Satisfaction is both transaction-specific and cumulative. Transaction-specific satisfaction evaluates one encounter, whereas cumulative satisfaction represents the customer's overall experience over time. The cumulative form is more relevant to loyalty because it absorbs variation across channels and episodes. Expectation-confirmation theory proposes that satisfaction rises when performance meets or exceeds prior expectations (Oliver, 1980). Digital communication influences both sides of this comparison: it can improve performance, but it can also raise expectations of instant response, accurate availability, and frictionless fulfilment. Loyalty is not identical to repeat purchase. Repetition may arise from convenience, inertia, location, low price, or lack of alternatives. Oliver (1999) conceptualizes loyalty as a deeply held commitment that develops through cognitive, affective, conative, and action stages. In SME settings, attitudinal indicators such as advocacy, preference, and resistance to switching should therefore complement behavioral indicators such as repurchase frequency and retention. Satisfaction is necessary but may not always be sufficient: switching costs, competitor attractiveness, product uniqueness, trust, and relationship norms can strengthen or weaken its conversion into loyalty.

The proposed model therefore treats satisfaction as a central but partial mediator. Digital transformation may directly sustain loyalty through convenience, availability, and personalized continuity. Service quality may directly sustain loyalty through trust and reduced risk. Nevertheless, a substantial share of both effects should pass through satisfaction because customers must interpret operational and technological improvements as a favorable overall experience before developing enduring preference.

2.4. Integrating capability, experience, and relationship perspectives

The integrated logic proceeds across three levels. At the organizational level, digital transformation represents the capability to reconfigure resources and processes. At the encounter level, service quality represents the customer's evaluation of how well those processes perform. At the evaluative level, satisfaction consolidates repeated encounters. At the relational level, loyalty captures the intention and behavior that follow. This chain avoids technological determinism: digital investment is an enabling condition, service execution is the experienced mechanism, satisfaction is the evaluative mechanism, and loyalty is the relational outcome.



3. RESEARCH METHOD

3.1. Review design

This conceptual article uses an integrative literature review. The approach is appropriate when a field is theoretically fragmented and the objective is to combine mature constructs into a new explanatory model rather than estimate a pooled effect. The review followed five stages: problem formulation; purposive search; relevance screening; concept-centric coding; and theoretical integration. The focal question required literature that could connect firm-level digital transformation with customer-level quality, satisfaction, and loyalty in an SME context.

3.2. Search scope and source selection

The search was organized around combinations of the terms digital transformation, digitalization, SME or small business, service quality or e-service quality, customer satisfaction, customer loyalty, retention, and mediation. Peer-reviewed journal articles and authoritative institutional reports published in English were prioritized. Foundational works were retained when they defined a construct or mechanism; more recent studies were used to establish contemporary digital and SME conditions. Sources were included when they addressed at least one focal relationship or clarified a boundary condition. Purely technical studies without a customer or organizational mechanism, opinion pieces, and retracted articles were excluded. Citation chaining from seminal and recent reviews was used to connect research streams. The purpose was theoretical saturation rather than an exhaustive count of all publications.

3.3. Conceptual coding and synthesis

Each source was coded by level of analysis, focal construct, proposed mechanism, outcome, context, and boundary condition. The comparison revealed three recurring mechanism families: capability mechanisms (integration, agility, data use, and reconfiguration), experience mechanisms (reliability, responsiveness, assurance, empathy, fulfilment, and recovery), and relationship mechanisms (satisfaction, trust, commitment, and loyalty). Rival explanations were retained where digitalization could increase expectations, depersonalize contact, create privacy concerns, or expose operational inconsistency. The resulting framework was assessed for logical completeness, construct distinction, testability, and relevance to resource-constrained Indonesian SMEs.

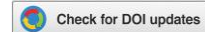
3.4. Methodological boundaries and research ethics

The review is interpretive and does not claim exhaustive systematic coverage, meta-analytic effect sizes, or empirical causal identification. It uses published literature and publicly accessible aggregate information; no human participants, personal data, or confidential organizational data were collected. Consequently, institutional review approval and informed consent were not required. These boundaries are made explicit to prevent conceptual propositions from being mistaken for tested findings.

4. INTEGRATIVE SYNTHESIS AND PROPOSITIONS

4.1. Digital transformation, service quality, and satisfaction

Digital transformation should improve service quality when it reduces fragmentation between customer-facing and back-office activities. Integrated order, inventory, payment, and communication data can improve accuracy; dashboards and alerts can accelerate response; customer histories can support personalization; and standardized digital workflows can make recovery more traceable. However, the effect depends on complementary human and process capabilities. A new channel layered onto unchanged routines may create duplicate work,



inconsistent information, and delayed responses. The first proposition therefore concerns realized transformation rather than technology adoption alone.

Proposition 1 (P1). Digital transformation is positively associated with perceived service quality in Indonesian SMEs when digital tools are integrated with customer-service processes and employee routines.

Digital transformation can also influence satisfaction directly. Convenience, expanded access, easier payment, faster information, and personalized communication can improve the total consumption experience even before customers evaluate a particular service-quality dimension. Yet direct gains will weaken when technology is difficult to use, excludes preferred channels, or appears unsafe. The proposition therefore represents an average positive mechanism with identifiable boundary conditions.

Proposition 2 (P2). Digital transformation is positively associated with customer satisfaction, particularly when digital interfaces are accessible, useful, trustworthy, and consistent across channels.

4.2. Service quality, satisfaction, and loyalty

High service quality increases the likelihood that performance will confirm or exceed expectations. Reliability confirms the core promise; responsiveness and recovery reduce the cost of uncertainty; assurance reduces perceived risk; and empathy signals that the relationship is valued. These cues combine into satisfaction. In SMEs, interpersonal flexibility can be an advantage, but only if it does not create inconsistent standards across employees or channels.

Proposition 3 (P3). Perceived service quality is positively associated with customer satisfaction in Indonesian SMEs.

Satisfaction should, in turn, increase loyalty because favorable accumulated evaluations lower the motivation to search, support preference, and make advocacy more likely. The effect should be stronger for cumulative satisfaction than for a single positive encounter and should be evaluated through both attitudinal and behavioral measures.

Proposition 4 (P4). Customer satisfaction is positively associated with attitudinal and behavioral customer loyalty in Indonesian SMEs.

Service quality may retain a direct effect on loyalty after satisfaction is considered. Repeated reliability and fair recovery can create trust and relationship confidence that are not fully captured by a general satisfaction score. Customers may remain loyal because they believe the SME will perform dependably in future uncertain situations.

Proposition 5 (P5). Perceived service quality is positively associated with customer loyalty, independently of its indirect effect through customer satisfaction.

4.3. Satisfaction as a mediating mechanism

The central argument is that satisfaction converts capability and experience into relationship outcomes. Digital transformation changes access, information, process speed, and interaction continuity; customers interpret these changes as favorable or unfavorable; the accumulated evaluation then shapes loyalty. Accordingly, a firm can digitalize without creating loyalty when customer satisfaction does not improve. This explains why adoption metrics, such as the number of tools or digital transactions, are weak substitutes for customer outcomes.

Proposition 6 (P6). Customer satisfaction mediates the positive relationship between digital transformation and customer loyalty.

A second indirect path begins with perceived service quality. Superior quality confirms expectations, generates satisfaction, and increases loyalty. Partial rather than complete mediation is expected because quality can create trust and reduce risk directly.

Proposition 7 (P7). Customer satisfaction mediates the positive relationship between perceived service quality and customer loyalty.

A sequential path completes the capability–experience–relationship chain. Transformation improves the processes and information that customers experience as quality; quality produces satisfaction; satisfaction produces loyalty. This sequential mechanism is theoretically stronger than a simple technology-to-loyalty claim because it identifies how organizational change becomes personally meaningful to the customer.

Proposition 8 (P8). Digital transformation has a positive sequential indirect association with customer loyalty through perceived service quality and customer satisfaction.

4.4. Boundary conditions

Four boundary conditions shape the proposed effects. First, resource complementarity matters: digital tools require employee competence, process redesign, leadership attention, and data governance. Second, digital trust matters: privacy or fraud concerns can offset convenience. Third, channel integration matters: conflicting prices, availability, or policies across platforms undermine reliability. Fourth, customer heterogeneity matters: age, digital literacy, location, disability, and channel preference influence whether a digital change is experienced as access or exclusion. Indonesian SMEs should therefore preserve assisted and human channels while developing digital capability.

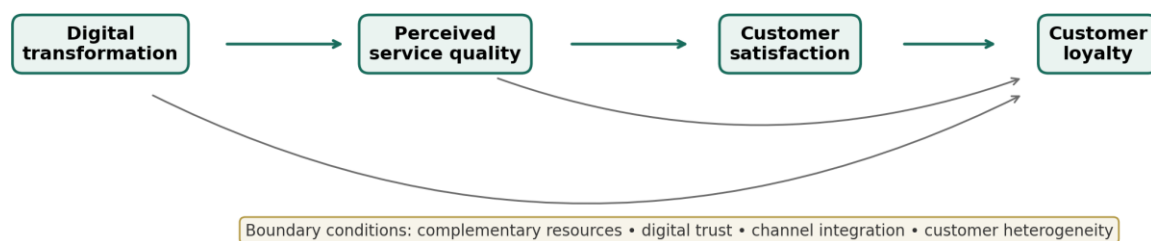


Figure 1. Capability–experience–relationship framework for customer loyalty in Indonesian SMEs

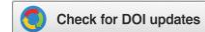
4.5. Summary of constructs and managerial indicators

Construct	Core meaning	Illustrative SME indicators	Primary role
Digital transformation	Integrated reconfiguration of customer-facing resources and processes	Channel integration, digital records, payment access, analytics use, workflow redesign	Organizational capability
Service quality	Customer judgment of service excellence across touchpoints	Accuracy, response time, assurance, empathy, fulfilment, recovery	Experienced mechanism
Customer satisfaction	Cumulative evaluation against expectations	Overall satisfaction, confirmation, value, experience rating	Evaluative mediator
Customer loyalty	Enduring preference and continued relationship	Repurchase, retention, advocacy, resistance to switching	Relational outcome

Table 1. Construct definitions and operational indicators for future empirical testing

5. DISCUSSION

The framework explains why the same technology can produce different customer outcomes across SMEs. Technology is not the immediate source of loyalty; it changes the resources and



processes through which service is delivered. Customers experience those changes as quality, integrate the experience into satisfaction, and decide whether the relationship deserves continuation. The result is a conditional, process-based explanation rather than a deterministic claim that more digitalization is always better.

The direct and indirect paths are complementary. A direct digital-transformation–loyalty path captures convenience, accessibility, and relational continuity. A direct service-quality–loyalty path captures confidence and trust built through dependable performance. The mediated paths capture evaluation: customers must perceive that the new process makes their experience better. Sequential mediation provides the most diagnostically useful explanation because it identifies two points of failure. Transformation may fail to improve service quality because processes are not integrated, or improved quality may fail to create satisfaction because expectations, fairness, value, or trust remain unfavorable.

The Indonesian context sharpens these mechanisms. Platform participation and QR payments can lower entry barriers, yet SMEs may depend on external marketplace rules, logistics providers, and payment infrastructures. Close owner–customer relationships can create empathy and fast recovery, while informal routines can also produce inconsistency and poor data continuity. Digital capability should therefore complement rather than erase relational strengths. The strategically appropriate configuration is high-tech and high-touch: standardized information and transactions combined with accessible human assistance and accountable recovery.

5.1. Theoretical implications

First, the article connects dynamic capabilities to customer outcomes. Dynamic-capability research explains resource reconfiguration but can leave the customer mechanism implicit. By introducing service quality and satisfaction, the framework specifies how reconfiguration becomes observable and evaluatively meaningful. The customer is not only the target of transformation but also the judge of whether transformation has produced value.

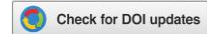
Second, the article extends service-quality logic upstream. Quality is usually modeled as an antecedent of satisfaction and loyalty, but the organizational capability that enables consistent quality is often omitted. Digital transformation supplies this upstream condition while also revealing that additional channels can increase coordination demands. Service quality is therefore both an outcome of capability and an antecedent of relationship performance.

Third, the framework refines the role of satisfaction. Satisfaction is neither a redundant synonym for quality nor the sole cause of loyalty. It is an integrating evaluation that partially mediates capability and experience effects, while trust, convenience, and reduced risk sustain plausible direct paths. Future models should compare partial, full, and sequential mediation rather than assuming one structure.

Fourth, the framework contributes an SME-specific boundary logic. Resource complementarity, owner centrality, platform dependence, informal routines, and customer heterogeneity can alter the value of digital investment. These conditions help explain why findings from large enterprises or digital-native firms may not generalize to Indonesian SMEs.

5.2. Managerial implications

Managers should begin with customer pain points, not technology catalogues. A practical diagnostic should identify where customers wait, repeat information, encounter inconsistent prices, abandon transactions, or struggle to obtain recovery. Digital investment can then be linked to a specific quality objective and an observable customer outcome. For example, an integrated inventory and messaging workflow should be evaluated by stock accuracy, response time, complaint incidence, satisfaction, and repurchase—not merely by system installation.



Implementation should proceed in stages. The first stage establishes reliable foundations: accurate product information, secure payment, clear ownership of digital inquiries, and documented recovery rules. The second stage integrates data and channels so that customers receive consistent information. The third stage uses customer histories and feedback for personalization and prevention. The fourth stage applies analytics to retention, but only after data quality, consent, and employee capability are adequate. This sequence prevents sophisticated technology from being placed on unstable processes.

A balanced scorecard should combine capability, quality, satisfaction, and loyalty indicators. Capability indicators include integrated channel coverage and employee use. Quality indicators include order accuracy, response and resolution time, fulfilment reliability, and recovery fairness. Satisfaction indicators include cumulative satisfaction and expectation confirmation. Loyalty indicators include repeat purchase, retention, referral, share of wallet, and resistance to switching. Monitoring all four levels helps managers locate the mechanism that requires correction.

Policymakers, associations, banks, and platform providers should complement access programs with process and service-quality support. Training should cover workflow redesign, data governance, cybersecurity, measurement, accessibility, and complaint recovery rather than focusing only on onboarding. Shared diagnostic tools and affordable interoperable systems can help resource-constrained SMEs translate digital participation into durable customer value.

5.3. Agenda for empirical testing

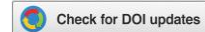
The model can be tested using a multi-industry survey of Indonesian SME customers linked, where possible, to firm-level digital-capability data. Digital transformation should be measured as strategic integration and reconfiguration rather than technology count. Service quality should combine core physical and electronic dimensions appropriate to the customer journey. Satisfaction should be cumulative, and loyalty should include attitudinal and behavioral indicators. Structural equation modeling can estimate direct, indirect, and sequential effects with bootstrapped confidence intervals. Multi-group or moderated analyses should compare micro, small, and medium firms; service and product sectors; Java and non-Java locations; digital literacy; and high versus low platform dependence. Longitudinal designs, objective retention data, and matched manager–customer samples would strengthen causal inference and reduce common-method bias.

6. CONCLUSION

This article explains customer loyalty in Indonesian SMEs through a capability–experience–relationship chain. Digital transformation creates the potential for accessible, integrated, and data-informed service. Service quality reveals whether that potential is realized in customer encounters. Satisfaction consolidates those encounters into an evaluation that supports loyalty. The principal conclusion is therefore conditional: digital transformation and service quality can drive loyalty, but customer satisfaction is the central mechanism through which operational improvements become durable relational value. SMEs should manage transformation as a quality and relationship program, not merely a technology acquisition program.

6.1. Limitations and future research

The article is conceptual and integrative; its propositions have not been tested with Indonesian primary data. The purposive review supports theory integration but does not provide exhaustive database coverage or meta-analytic estimates. Construct relationships may also vary by sector, region, firm size, customer digital literacy, and the role of third-party platforms. Future research should preregister search or empirical protocols, validate measures in Bahasa Indonesia, collect



matched multi-source and longitudinal data, compare alternative mediation models, and investigate nonlinear effects. Qualitative cases can also reveal how owner decisions and frontline improvisation shape channel integration and recovery. These studies would establish where the framework generalizes and where context-specific revision is needed.

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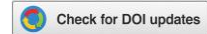
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Use of generative AI: Generative AI was used to assist language drafting, structural organization, and document formatting. The author is responsible for verifying the arguments, citations, originality, and final content before publication.

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REFERENCES

- Bank Indonesia. (2025). QRIS Jelajah Indonesia 2025 dorong digitalisasi dengan wisata budaya. https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_2717025.aspx
- Caruana, A. (2002). Service loyalty: The effects of service quality and the mediating role of customer satisfaction. *European Journal of Marketing*, 36(7/8), 811–828. <https://doi.org/10.1108/03090560210430818>
- Cioppi, M., Curina, I., Francioni, B., & Savelli, E. (2023). Digital transformation and marketing: A systematic and thematic literature review. *Italian Journal of Marketing*, 2023, 207–288. <https://doi.org/10.1007/s43039-023-00067-2>
- Costa, A. C. F., Capelo Neto, F., Espuny, M., Rocha, A. B. T., & Oliveira, O. J. de. (2024). Digitalization of customer service in small and medium-sized enterprises: Drivers for the development and improvement. *International Journal of Entrepreneurial Behavior & Research*, 30(2/3), 305–341. <https://doi.org/10.1108/IJEBr-10-2022-0953>
- Eller, R., Alford, P., Kallmünzer, A., & Peters, M. (2020). Antecedents, consequences, and challenges of small and medium-sized enterprise digitalization. *Journal of Business Research*, 112, 119–127. <https://doi.org/10.1016/j.jbusres.2020.03.004>
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69–96. <https://doi.org/10.1509/jm.15.0420>
- OECD. (2021). The digital transformation of SMEs. OECD Publishing. <https://doi.org/10.1787/bdb9256a-en>
- OECD. (2024). OECD economic surveys: Indonesia 2024. OECD Publishing. <https://doi.org/10.1787/de87555a-en>



- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460–469. <https://doi.org/10.1177/002224378001700405>
- Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63(Special Issue), 33–44. <https://doi.org/10.1177/00222429990634s105>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233. <https://doi.org/10.1177/1094670504271156>
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, 28(2), 118–144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- World Bank. (2021). Beyond unicorns: Harnessing digital technologies for inclusion in Indonesia. World Bank. <https://openknowledge.worldbank.org/handle/10986/36018>
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31–46. <https://doi.org/10.1177/002224299606000203>
- Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science*, 30(4), 362–375. <https://doi.org/10.1177/009207002236911>